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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,802	01/29/2004	Bradley M. Lewis		5562

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EXAMINER	
ASSOUAD, PATRICK J	

ART UNIT	PAPER NUMBER
2857	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

N/A ETC

Office Action Summary	Application No.	Applicant(s)	
	10/767,802	LEWIS ET AL.	
	Examiner	Art Unit	
	Patrick J. Assouad	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/29/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. Contrary to Applicant's assertion, the IDS filed 1/29/04 which includes a list of patents, is not on a Form PTO-1449. In addition, no serial no. has been provided on the cover letter, nor has Applicant's cover letter for the IDS been signed. However, the art cited therein has been entered into the Examiner's PTO-892, attached.

Claim Objections

2. Claim 12 is objected to because of the following informalities: in line 3, "product" should be –produce–. Claims 18 and 19 are objected to because of the following informalities: in claim 18, we see a "Second Layer of Interval Determination" but there is no "First Layer of Interval Determination." In Claim 19, we see a "Multi-interval Third Integration Layer" but we see no "First" or "Second Integration Layer." Appropriate correction is required. It is noted that a definition for a "Data Translation Layer" is on pg. 4 of the Specification. A definition for "Interval Determination Layer" is on pg. 5 of the Specification. And finally, a definition for a "Multi-interval Integration Layer" is on pg. 5 of the Specification. Note that the terms in the Specification do not identically comport with the terms in the claims.

3. Claim 8 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must refer back to another claim in the alternative only. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 5, 12, 13 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Regarding claims 5 and 13, the phrase "such as" or "and similar" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention and/or it is difficult to determine the true metes and bounds of the invention. See MPEP § 2173.05(d). The language "...and others" in claims 5 and 13 and "and similar..." in claims 12 and 15 do not allow the Examiner to precisely determine the metes and bounds of the claimed invention. In addition, in claim 5, "TGP/IP" should be – TCP/IP – and there should be a comma after "wind" in claim 15. Correction is required.

7. Note that claim 5 appears to have a typographical error in that it does not refer to a preceding claim. Correction is required. It is presumed that it should refer to claim 1 and will be examined as such.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

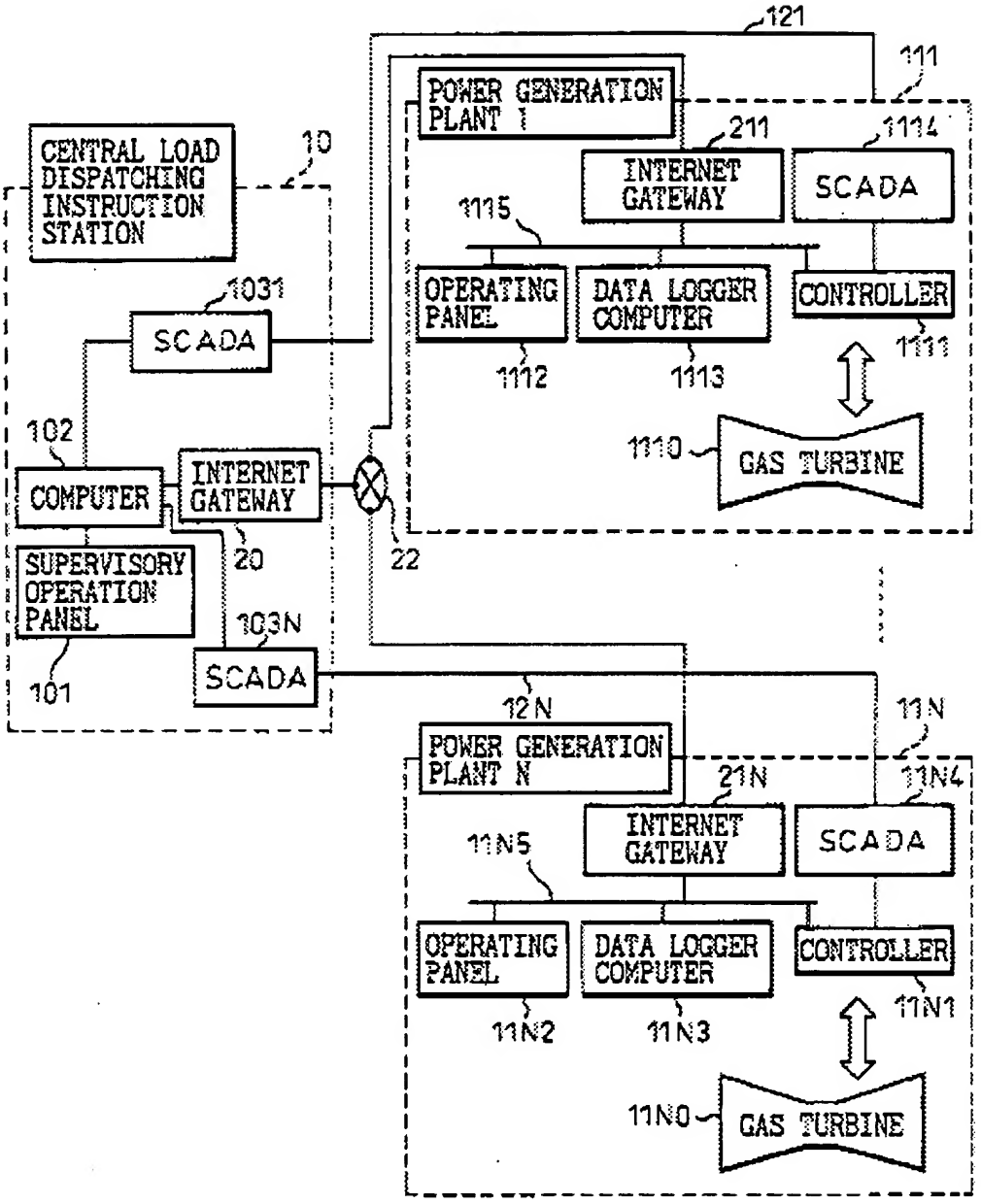
9. Claims 1-3, 5-7, 9, and 11-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanaka (US 6,766,224 B2).

10. Fig 2 of Tanaka is reproduced below for ease in understanding this rejection.

11. Tanaka discloses:

> An integrated operation instructing system operates gas turbine power generation plants in a highly efficient and economical manner is provided. A gas turbine power generation plant 11n is controlled by a controller 11n1 while operating status data of the gas turbine power generation plant 11n are collected by a data logger computer 11n3, and transmitted to a central load dispatching instruction station 10 via the Internet 22. A computer 102 evaluates the deteriorating rate of the gas turbine based on the operating status data, and calculates an optimal target load taking the deteriorating rate into account. The optimal target load is transmitted via an exclusive telecommunication line 12n to the controller 11n1, and the output of the gas turbine power generation plant 11n is controlled based on this optimal target load. (Abstract)

Fig. 2


121
111
POWER GENERATION PLANT 1
211
1114
INTERNET GATEWAY
SCADA
1115
OPERATING PANEL
DATA LOGGER COMPUTER
CONTROLLER
1111
1112
1113
1110
GAS TURBINE
CENTRAL LOAD DISPATCHING INSTRUCTION STATION
10
1031
SCADA
102
COMPUTER
INTERNET GATEWAY
20
22
SUPERVISORY OPERATION PANEL
101
103N
SCADA
12N
11N
POWER GENERATION PLANT N
21N
11N4
INTERNET GATEWAY
SCADA
11N5
OPERATING PANEL
DATA LOGGER COMPUTER
CONTROLLER
11N1
11N2
11N3
11N0
GAS TURBINE

12. The correspondence between the instant claimed invention and that of Tanaka is as follows:

"furnishing a system for tracking and calculating values relevant to the operation of turbines" and "means to track the quantitative data emanating from a series of controllers connected to said power-generating devices..." is collecting operating status data of the gas turbine power generator plants 1-N connected to (SCADA) controllers via the data logger computers and various communication lines to the central load dispatching station computer system;

"calculating precise automated quantification of said data for determining the optimum settings for operation of said turbines" and "means to optimally and automatically determine values...so as to precisely calculate information critical to successful operation of said power-generating devices" is the central load sipatching station computer system evaluates the receives turbine operational data and calculates and then transmits back to the (SCADA) turbine controllers, an optimal target load that minimizes total operating costs, and takes into account other factors including turbine deterioation.

13. As per dependent claim 2 which relates to "calculating production of power characteristics," see at least Fig. 10 and its discussion in col. 5 regarding feasible maximum power output.

14. As per dependent claim 3 which refers to "consumption of fuel characteristics", see at least the botton of col. 5 and the top of col. 6 which discusses minimizing operating costs by taking into account the price of fuel per unit volume and other factors relates to fuel consumption.

15. As per dependent claims 5, 7, 13, and 16, which refer to "combination of communications protocols such as TCP/IP, GSM, and others," note that the Internet Gateway devices of Tananka must use standard, well-known TCP/IP, and the SCADA system of Tanaka utilizes many other well-known standard communication protocols, such as PROFIBUS, DEVICENET, HART, CAN, LAN, LONTALK, etc., as does the telephone line or exclusive telecommunication line of Tanaka. As to "storing" data, ALL computer-based systems store data to some extent to function properly. See the various computers and controllers of Tanaka.

16. As per dependent claims 6 and 14 which relate to a "web-based management and information sub-system", see at least the Internet Gateways of Fig. 2 of Tanaka.

17. As per dependent claims 11-12 and 15 which relate to various "turbines," see at least the gas turbines of Fig. 2 of Tanaka.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19. Claims 4, 8, 10, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka as applied to claims 1 and 9 above, and further in view of Frantz et al. (US 2002/0193969 A1) filed 6/15/01.

20. Franz et al. disclose :

> A web-based system monitors a plurality of different gas turbine plants and includes a server system that summarizes data from a plurality of plants. The system also includes a client system including a browser and a storage device for storing information. The server system is configured to be coupled to the client system and retrieves operational data from the plurality of gas turbine plants, stores the data in the centralized database, and generates graphical representations of the operational data based on the stored data. More specifically, operational data from a plurality of turbine plants is summarized and viewable remotely with the server system. (Abstract)

21. As per dependent claims 4, 8 and 10 which refer to "wear determination on said turbines," "creating...comparative performance ratings between said turbines," and "calculate[ing] values relevant to the production of power, consumption of fuel and determination of wear," see at least the Brief Summary of Frantz et al:

In one aspect, a web-based system that monitors a plurality of different gas turbine plants and includes a server system that processes data from a plurality of plants is provided. The web-based system also includes a client sub-system including a browser and a storage device for storing information. The server system is configured to be coupled to the client sub-system and retrieves operational data from the plurality of gas turbine plants, stores the data in the centralized database, and generates graphical representations of the operational data based on the stored data. More specifically, operational data from a plurality of turbine plants is compiled such that operational data retrieved from a plurality of plants is concurrently viewable. The web-based system creates a central repository of operational data for users to access and view operational data from a plurality of plants. As a result, the web-based monitoring system permits customers to analyze their turbine plant fleet and perform unit-to-unit comparisons in a cost-effective and reliable manner. [emphasis added]

and paragraph 0024 of Frantz et al.:

FIG. 3 is a flowchart 70 illustrating an exemplary embodiment of a digitized method for monitoring operational data from a plurality of gas turbine plants (not shown). Initially, equipment to be monitored is selected 72. Such equipment may include, but is not limited to, gas turbines and/or gas turbine packages which may include generator sets, pump sets, and/or compressor sets. Monitored equipment within the plurality of gas turbine plants is equipped with a data retrieval computer (not shown) that retrieves 80 operational data from the equipment selected 72 for monitoring. More specifically, each data retrieval computer is electrically coupled to the equipment and receives signals from the equipment that are indicative of operating conditions of the equipment. For example, the data retrieval computers may receive a plurality of parameters from equipment including, but not limited to, vibrational data, operating temperatures, operating speeds, operating pressures, valve and actuator settings, fuel demand, power generation, operational setting percentages, alarms, and operating states and conditions. [emphasis added]

and Fig. 7 of Frantz et al. (below):

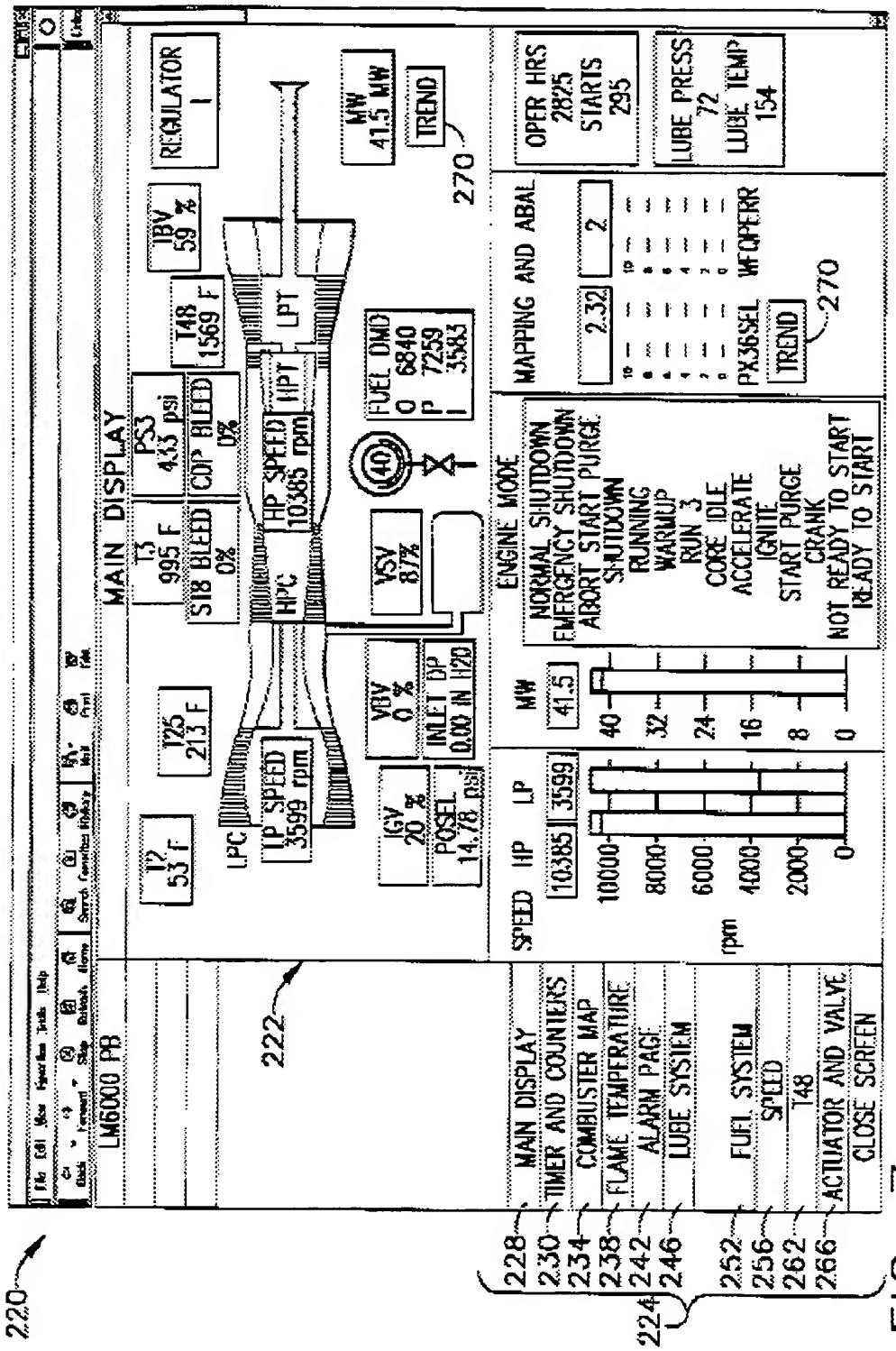

MAIN DISPLAY
LM6000 PB
T2 53 F
T25 213 F
T3 995 F
S1B BLEED 0%
PS3 443 psi
COP BLEED 0%
T48 1569 F
IBV 59 %
REGULATOR 1
LPC
LP SPEED 3599 rpm
HPC
HP SPEED 10385 rpm
HPT
LPT
IGV 20 %
POSEL 14.78 psi
VBV 0 %
INLET DP 0.00 IN H20
VSV 87%
FUEL DMD 0 6840 P 7259 I 3583
MW 41.5 MW
TREND
270
ENGINE MODE
NORMAL SHUTDOWN
EMERGENCY SHUTDOWN
ABORT START PURGE
SHUTDOWN
RUNNING
WARMUP
RUN 3
CORE IDLE
ACCELERATE
IGNITE
START PURGE
CRANK
NOT READY TO START
READY TO START
MAPPING AND ABAL
2.32
2
PX36SEL WFOPERR
TREND
270
OPER HRS 2825
STARTS 295
LUBE PRESS 72
LUBE TEMP 154
SPEED HP LP
10385 3599
MW
41.5
rpm
10000
8000
6000
4000
2000
0
40
32
24
16
8
0
222
MAIN DISPLAY
TIMER AND COUNTERS
COMBUSTOR MAP
FLAME TEMPERATURE
ALARM PAGE
LUBE SYSTEM
FUEL SYSTEM
SPEED
T48
ACTUATOR AND VALVE
CLOSE SCREEN
220
224
228
230
234
238
242
246
252
256
262
266

FIG. 7

22. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the collection of numerous operational data from numerous turbines of Frantz et al. into the turbine optimization system of Tanaka because such a combination allows an operator to readily view a summary of remote turbine operations, and make appropriate economic and management decisions based on comparative analyses of the various remote turbine operations. One example of an economic or management decision would be maintenance of certain parts that show signs of wear or fatigue or that are trending to abnormal levels of operation.

23. As per dependent claims 17-19 which relate to the various claimed "layers," it is noted that a definition for a "Data Translation Layer" is on the bottom of pg. 4 of the instant Specification. A definition for "Interval Determination Layer" is at the top of pg. 5 of the instant Specification. And finally, a definition for a "Multi-interval Integration Layer" is also at the top of pg. 5 of the instant Specification. Note that the terms in the Specification do not identically comport with the terms in the claims.

24. As per dependent claims 17-19 and in light of the definitions of the various "layers" in the Specification, the Examiner directs Applicant's attention to the various data point values and units, the various events and alarms, and finally the various "intervals of interest" for each turbine operation that are selectable and viewable in at least Figs. 4-7 of Frantz et al.

Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the attached PTO-892.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Assouad whose telephone number is 571-272-2210. The examiner can normally be reached on Tuesday-Friday, 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J Assouad
Primary Examiner
Art Unit 2857

pja